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EXAMINER

CADUGAN, ERICA E

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 09/11/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,457

Applicant(s)

HANS-DIETER, MULLER

Examiner

Erica E Cadugan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-12, 14, 18-22 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) 21, 22 and 25-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-12, 14, 18-20 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 10 September 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 14
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 21-22 and 25-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 13.
2. Applicant's election with traverse of the species of Figure 5a (claims 6-12, 14, 18-20, and 31, with 31 being a generic claim) in Paper No. 13 is acknowledged. However, Applicant did not provide any grounds for the traversal.

The requirement is still deemed proper and is therefore made FINAL.

3. This application contains claims 21-22 and 25-30 that are drawn to an invention nonelected with traverse in Paper No. 13. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Objections

4. Claims 12 and 18 are objected to because of the following informalities: claim 12 lacks a period at the end thereof; in claim 18, it appears that --then-- should be inserted in line 3 prior to "said second" to be consistent with the timing language provided earlier in the claim (e.g., "said first member first engages..."). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 6-12, 14, and 18-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, claim 6 as amended sets forth the limitation "said second member moving axially with respect to the tool when the tool is grasped by the second member". However, the specification as originally filed does not support this limitation. Note that there does not appear to be support in the specification as originally filed for a second member that grasps the tool and then moves axially with respect to the tool while still grasping the tool, i.e., "when the tool is grasped by the second member" as set forth in claim 6. It appears that in actuality, the second member moves in the longitudinal direction of the tool in order to perform the grasping by the second member (which is different from moving the second member in the longitudinal direction of the tool after the tool has already been grasped by the second member). See page 11, paragraph beginning "[t]he interaction between..."

Specifically regarding claim 14, claim 14 sets forth that an "actuating device drives said first and second members". However, as set forth in the specification as originally filed, in the embodiment of Figure 5a wherein the second member 12 moves in the direction of the longitudinal axis of the tool, only the second member 12 of the gripper is moved. Thus the specification as originally filed does not appear to support that the actuating device drives both the "first and second members" as set forth in claim 14 (see pages 14-15, paragraph beginning at the bottom of page 14 with "[w]ith the principle illustrated in Fig. 5a...").

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6-12, 14, and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, for example, there is no axis of the tool defined in the claim for determining what is meant by "axially". As a side note, it is noted that merely providing the tool (in the claim) with "an axis" will overcome this rejection, but that "an axis" is a very broad limitation in that the tool is considered to have an infinite number of axes that can be drawn through it. Examiner suggests providing the tool (in the claim) with a "longitudinal axis".

Claim 6 sets forth the limitation "said second member moving axially with respect to the tool when the tool is grasped by the second member".

In claim 10, it is unclear as set forth in the claim when the movement of the first and second members occurs in the claimed method step that "said first and said second member are moved relative to each other". Examiner suggests changing "moved" to --moveable--.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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10. Claims 6-12, 14, 18-20, and 31, those of which were rejected under 35 USC 112 above are as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by of U.S. U.S. Pat. No. 5,188,579 (Ruschle et al.).

Ruschle et al. teaches a gripper arrangement for a tool including a first member 15 and a pivoting second member 18 for gripping a tool 11 (Figures 1-2). Note that the first 15 and second 18 members are axially spaced from one another in the direction of the tool axis (Figures 1-2), and therefore, they are gripping different regions of the tool 11. Also, note that the members 18 move with respect to the tool when the tool is engaged by member 15 as set forth in claim 31 (see Figure 2).

Regarding claim 6, it is noted that no axis is provided for determining what is meant by "axially" in the claim, and that the pivoting members 18 move "axially" with respect to an axis of the tool that extends vertically as viewed in Figure 2 (see Figure 2). Likewise, regarding claim 20, note that members 15, 15a have guides 16, 16a that serve to align the tool in the direction extending into the paper as viewed in Figure 2, which direction is "radial" to the axis described in the first sentence of this paragraph (see also col. 6, lines 39-45).

Regarding claim 7, firstly, Ruschle teaches holders (having surfaces) 21 and 21a (Figures 1-2, col. 6, lines 46-57). Alternatively, jaw member 18 has thereon holder 21 (having a surface) as well as a projecting member that projects from the tip thereof as viewed in Figure 1, which tip also has a surface, and note that there would appear to be no reason why this tip could not be used for contacting/gripping a tool.

Regarding claim 8, note that the gripper includes two claw members 18, 18a, and that the arcuate shape of the portion of these members that includes holders 21 and 21a is such that they

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are capable of engaging “at least half of a diameter of said tool” as set forth in the claim. Note that when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. See MPEP Section 2112.01.

Regarding claim 9, note that members 15, 15a each have a guide member 16, 16a, respectively for engaging a tool (Figures 1-2, col. 6, lines 40-41).

Regarding claim 11, note that when the members 18, 18a pivot from the position shown in Figure 2 to the position shown in Figure 1, they move “toward” the members 15, 15a (see Figures 1-2).

Regarding claim 14, note that Ruschle specifically teaches that an actuating member is used for pivoting jaws 18, 18a (col. 1, lines 62-68). Additionally note that the gripper arm 12 is used to move the entire gripper or tool changer 10 and thus there exists some sort of actuating device that “drives” the members 15, 15a, i.e., when the whole gripper 10 is moved, members 15, 15a are also moved or “driven” (see Figures 1-2, col. 6, lines 31-37, also Figure 3 and col. 7, lines 18-20, for example).

Regarding claim 19, note that the first member(s) 15, 15a are “abutted” by the second member(s) 18, 18a when the tool 11 is being “interacted” with (see Figures 1-2).

Additionally, while Ruschle et al. does not specify the structure of the tool and thus does not expressly teach the groove of the tool, it is noted that the claims in question are to the “gripper” and that all language relating to the tool is set forth in a functional or intended-use format, e.g., “for conveying a tool...having a shank and a groove”, also e.g., the first member “for interacting with said groove”, etc. Firstly, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in

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order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Thus, by virtue of the axial spacing of the members 15 and 18, they are “capable” of gripping or “interacting with” the various portions of the tool as claimed. Additionally note that “[i]nclusion of material or article worked on by a structure being claimed does not impart patentability to the claims.” *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). See also MPEP section 2115. Thus, the inclusion of the specific article of the tool and its structure does not impart patentability to the claims as long as the gripper is **capable** (emphasis added) of working on, in this case, gripping/interacting and conveying, the article in question, which as described above, it is.

11. Claims 6-12, 14, 18-19, and 31, those of which were rejected above under 35 USC 112 are as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,328,224 (Jacobsen et al.).

Jacobsen et al. teaches a robotic grasping manipulator (see abstract) including thumb 8 that pivots about axes 12 and 16 (see Figures 1-3 and col. 3, lines 15-16), movable finger 100 that pivots on pin 86 (see Figures 1-2), and fixed index finger 70 (Figures 1-3, col. 3, line 46). Note that any of elements 8, 100, or 70 can be considered the claimed “first member”, and that either or both of finger 100 or thumb 8 can be considered the “second member” as claimed.

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Note that all three of these members are spaced along an axis extending into the page as viewed in Figure 2 (see Figures 2, and also Figures 1 and 3).

Additionally, while Jacobsen et al. does not specify the structure of the tool and thus does not expressly teach the groove of the tool, it is noted that the claims in question are to the “gripper” and that all language relating to the tool is set forth in a functional or intended-use format, e.g., “for conveying a tool...having a shank and a groove”, also e.g., the first member “for interacting with said groove”, etc. Firstly, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Thus, by virtue of the “axial” spacing of the members 8, 70, and 100 described above, they are “capable” of gripping or “interacting with” the various portions of a tool as claimed. Additionally note that “[i]nclusion of material or article worked on by a structure being claimed does not impart patentability to the claims.” *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). See also MPEP section 2115. Thus, the inclusion of the specific article of the tool and its structure does not impart patentability to the claims as long as the gripper is **capable** (emphasis added) of working on, in this case, gripping/interacting and conveying, the article in question. Note that Jacobsen teaches that a “variety of different shaped objects may be grasped and held between the two fingers and thumb” (see abstract, last sentence), and particularly in light of this teaching,

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there would appear to be no reason why Jacobsen's device could not be used to perform the claimed functions of gripping/interacting and conveying the tool as claimed.

Specifically regarding claim 8, note that thumb 8 and finger 100 form a "claw", and that there appears to be no reason why these members could not be used with a tool such that these members "engage at least half of a diameter" thereof (see Figures 1-4, and also see Figures 7 and 10-12 and 14, for example).

Specifically regarding claim 14, Jacobsen specifically teaches actuating devices for moving thumb 8 and finger 100 (col. 4, line 64 through col. 5, line 3, for example). Additionally, in order for the device to operate as described to grasp and pick up objects, it is inherent that the entire device must be "actuated" in some way to cause such movement, thus "actuating" member 70 since it is moved with the entire device (see col. 3, lines 10-14, for example).

Regarding claim 19, note that the members 70 and 100 "abut" one another, (see Figures 1-2 and col. 4, lines 25-34).

Response to Arguments

12. Applicant's arguments with respect to the elected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

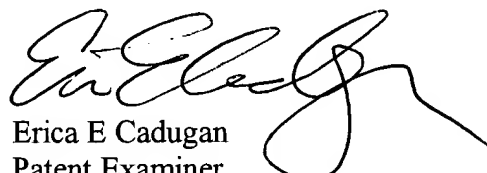
Faxing of Responses to Office Actions and Contact Information

15. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302 or, for responses after final rejection only, to (703) 872-9303. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica Cadugan whose telephone number is (703) 308-6395. The examiner can normally be reached on Monday through Thursday from 7:30 a.m. to 5:00 p.m.,

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and every other Friday from 7:30 a.m. to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached at (703) 308-2159. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 3700 receptionist whose telephone number is (703) 308-1148.



Erica E Cadugan
Patent Examiner
Art Unit 3722

eec
September 4, 2003